SUPPORTING STATEMENT FOR
EPA INFORMATION COLLECTION REQUEST NUMBER 959.10
"FACILITY GROUND-WATER MONITORING REQUIREMENTS "

January 23, 1998

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EXHIBITS

1. IDENTIFICATION OF THE INFORMATION COLLECTION

1(a) Title and Number of the Information Collection

This Information Collection Request (ICR) is entitled, "Facility Ground-Water Monitoring Requirements," ICR number 959.10. This ICR renews the existing ICR, "Facility Ground-Water Monitoring Requirements," ICR number 959.09.

1(b) Short Characterization

Subtitle C of the Resource Conservation and Recovery Act of 1976 (RCRA) creates a comprehensive program for the safe management of hazardous waste. Section 3004 of RCRA requires owners and operators of facilities that treat, store, or dispose of hazardous waste to comply with standards established by EPA that are "necessary to protect human health and the environment." Section 3005 provides for implementation of these standards under permits issued to owners and operators by EPA or authorized States. Section 3005 also allows owners and operators of facilities in existence when the regulations came into effect to comply with applicable notice requirements to operate until a permit is issued or denied. This statutory authorization to operate prior to permit determination is commonly known as "interim status." Owners and operators of interim status facilities also must comply with standards set under Section 3004.

EPA promulgated ground-water monitoring standards for interim status facilities in 1980 (45 FR 33154 May 19, 1980), codified in 40 CFR Part 265, Subpart F, and for permitted facilities in 1982 (47 FR 32274 July 26, 1982), codified in 40 CFR Part 264, Subpart F. Both sets of standards establish programs for protecting ground water from releases of hazardous wastes from land disposal facilities (LDFs). Under Part 264, LDFs also are known as regulated units and include surface impoundments, waste piles, land treatment units, and landfills.

PERMITTED FACILITIES

40 CFR Part 264, Subpart F establishes requirements for permitted LDFs, but not all information requests in Part 264 are covered in this ICR. The information collection requests in the following sections are found in either the "General Hazardous Waste Facility Standards" ICR, ICR number 1571, or the "Part B Permit Application, Permit Modifications, and Special Permits" ICR, ICR number 1573.

Applicability, Compliance Period, and General Ground-Water Monitoring Requirements

Information collection requirements under Sections 264.90, 264.96, and 264.97 are covered in either ICR Nos. 1571 or 1573 because they are either retained in the operating record or submitted with a permit application. Section 264.90(b) discusses demonstrations for exemption from regulation of releases into the uppermost aquifer. These requirements are covered in ICR number 1573. Section 264.96(c) discusses demonstrations that the ground-water protection standard of §264.92 has not been exceeded for three years. Section 264.97(g)(1)-(2) covers proposals for intervals between sampling and sampling procedures. These requirements are covered in ICR number 1571. Section 264.97(h) discusses statistical methods used for evaluating ground-water data. Section 264.97(j) discusses the recordkeeping of ground-water data. These requirements are covered in ICR number 1573. Requirements under these sections are not discussed elsewhere in this ICR.

Detection Monitoring Program

Under Section 264.98, owners and operators of LDFs are required to implement a detection monitoring program to determine whether hazardous wastes are leaking from the facility at levels great enough to warrant compliance monitoring under Section 264.99. The detection monitoring requirements under 40 CFR 264.98 require owners and operators to keep a record of all ground-water analytical data collected during monitoring, and to submit notifications of detected contamination, the presence of new constituents, and exceeded concentration limits. Records under these sections must be made available to EPA for review. The following detection monitoring sections are not included in this ICR. Section 264.98(g)(4) addresses application for a permit modification to establish a compliance

monitoring program. Section 264.98(h) addresses application for a permit modification to make changes to the detection monitoring program. These requirements are covered in ICR number 1573.

Compliance Monitoring Program

Under Section 264.99, owners and operators may have to implement a compliance monitoring program to determine if a statistically significant increase over the concentration limits of the hazardous constituents listed in the permit exists. The compliance monitoring requirements under 40 CFR 264.99 require owners and operators to keep a record of all ground-water analytical data collected during monitoring, and to submit notifications of detected contamination, the presence of new constituents, and exceeded concentration limits. Records under these sections must be made available to EPA for review. Owners and operators of facilities detecting contamination must also submit an engineering feasibility plan for corrective action or, if they wish to seek approval of an alternate concentration limit (ACL), all data necessary to establish an ACL. The following compliance monitoring sections are not included in this ICR. Section 264.99(h)(2) discusses application for a permit modification to establish a corrective action program. Sections 264.99(i)(3) and 264.99(j) discuss applications for permit modifications to make changes to the compliance monitoring program because of contamination from a non-regulated unit, and changes to the compliance monitoring program, respectively. These requirements are covered in ICR number 1573.

Corrective Action

Under Section 264.100, corrective action may be instituted to bring a facility back into compliance with the ground-water protection standard. The corrective action requirements under 40 CFR 264.100 require owners and operators to make demonstrations in order to terminate, or obtain exemptions from, corrective action. Owners and operators conducting a corrective action program must keep a record of all ground-water analytical data collected during monitoring, submit reports on the effectiveness of the program, and submit permit modification applications where appropriate. The following corrective action program sections are not included in this ICR. Section 264.100(h) addresses application for permit modifications to make changes to the corrective action program. These requirements are covered in ICR number 1573. Section 264.101(c) discusses demonstrations for exemption from undertaking corrective action beyond the facility boundary. These requirements are all covered in ICR number 1571.

INTERIM STATUS FACILITIES

40 CFR Part 265, Subpart F establishes requirements for interim status land disposal facilities. All of the information collection requirements for interim status LDFs are covered by this ICR.

Applicability and Alternative Ground-Water Monitoring Systems

Under Section 265.90, all or part of the interim status ground-water monitoring requirements may be waived if the owner or operator provides (1) a written demonstration establishing that corrosive wastes from the facility will be neutralized to the extent that they no longer meet corrosivity characteristics before they can migrate out of the impoundment, and/or (2) a written demonstration, kept at the facility, which establishes that there is a low potential for migration of hazardous waste or hazardous waste constituents from the facility through the uppermost aquifer to water supply wells or to surface water. The first demonstration applies only to surface impoundments that are used to neutralize wastes which are hazardous solely because they exhibit corrosivity characteristics, and contain no other hazardous wastes.

40 CFR 265.90 also allows some owners and operators to implement an alternative ground-water monitoring system. Owners and operators installing an alternative system must submit a specific plan that meets the regulatory standards of §265.93(d)(3). Owners and operators of these facilities must also conduct a ground-water quality assessment program, report the initial results of the assessment program to the Regional Administrator, and keep records of subsequent quarterly assessments until final closure of the facility. An annual ground-water quality assessment report is also required.

40 CFR 265.91 also allows some owners and operators to select an alternate hydraulically downgradient monitoring well location, provided they meet certain criteria, make and a submit a demonstration and obtain a certification from a qualified ground-water scientist.

Sampling, Analysis and Assessment

40 CFR 265.92 and 265.93 require owners and operators of non-exempt interim status facilities to develop and conduct a sampling and analysis program to monitor for ground-water contamination, and to implement a ground-water quality assessment program if contamination is detected. Ground-water quality assessment plans must be submitted to EPA. The sampling and analysis plan must be kept at the facility, and made available for inspection so that EPA may refer to it in evaluating the effectiveness of the program. Owners and operators must also provide notification of changes in indicator parameter concentrations and provide an initial ground-water quality assessment report. Notifications and reports are collected and analyzed by EPA in order to provide immediate information on contamination and changes in ground-water quality.

Recordkeeping and Recording

Specific recordkeeping and reporting requirements for interim status LDFs are established under 40 CFR 265.94. These regulations require that facilities not conducting ground-water quality assessments keep records of all ground-water analytical data at the facility. These facilities also are required to submit quarterly reports during the first year on drinking water suitability parameters, and annual reports on indicator parameter concentrations, variations from background levels, and ground-water surface elevations. Facilities conducting ground-water quality assessments must keep records of the data obtained during the assessments, and submit annual ground-water quality assessment reports. Reports collected under this section provide EPA with the information necessary to evaluate the impact of the facility on ground-water quality. Records are not submitted to EPA but must be made available for inspection.

2. NEED FOR AND USE OF THE COLLECTION

2(a) NEED AND AUTHORITY FOR THE COLLECTION

PERMITTED FACILITIES

Detection Monitoring

40 CFR 264.98(c) requires owners and operators of facilities conducting a detection monitoring program to keep a record of all ground-water analytical data obtained under the program. Owners and operators must notify EPA of any statistically significant evidence of ground-water contamination (§264.98(g)(1)), but may demonstrate that such contamination is caused by a source other than the regulated facility. Owners and operators detecting contamination are required to submit an engineering feasibility plan for a corrective action program and, if they wish to seek approval for an ACL, all data necessary to establish an ACL (§264.98(g)(5)). Owners, operators and EPA use the information required under this section to determine whether the facility is affecting ground-water quality, and whether a compliance monitoring program under §264.99 is warranted. This information is also used for developing and evaluating an appropriate compliance monitoring program. The detection monitoring requirements contribute to EPA's goal of preventing undetected releases of hazardous waste from treatment, storage, and disposal facilities.

Compliance Monitoring

40 CFR 264.99(c)(2) requires owners and operators of facilities conducting a compliance monitoring program to keep a record of all ground-water analytical data obtained during monitoring. Owners and operators are required under §§264.99(g) and (h) to notify EPA of the presence of new constituents or exceeded concentration limits at any monitoring well. Section 264.99(i) allows owners and operators to demonstrate that the exceeded concentration limits are caused by a source other than the regulated facility, or by an error in sampling and analysis. The information in this section is used by owners, operators and EPA to evaluate the extent of ground-water contamination at the facility and to determine whether a corrective action program under §264.100 is warranted. The compliance monitoring requirements contribute to EPA's goal of ensuring that ground-water contamination that exceeds acceptable levels is quickly identified and addressed.

Corrective Action

EPA promulgated regulations in 40 CFR 264.100 establishing requirements for owners and operators of hazardous waste LDFs conducting a corrective action program. Section 264.100(g) requires owners and operators conducting a corrective action program to submit a semi-annual report on the effectiveness of the program. This report allows EPA to monitor the progress of corrective action and identify any changes that should be made to the program. Exemption from the corrective action requirements may be obtained by submitting a demonstration under §264.100(e)(2). Corrective action may be terminated by demonstrating that the ground-water protection standard has not been exceeded for a period of three consecutive years under §264.100(f). This information is used by EPA to confirm that corrective action is undertaken where necessary to address ground-water contamination. The corrective action requirements contribute to EPA's goal of minimizing damage to the environment caused by the treatment, storage and disposal of hazardous waste by bringing regulated facilities back into compliance with their ground-water protection standards.

INTERIM STATUS FACILITIES

Applicability and Alternative Ground-Water Monitoring Systems

EPA promulgated standards in 40 CFR 265.90 establishing the applicability of ground-water monitoring and requirements for alternative ground-water monitoring systems. To waive the ground-water monitoring requirements, owners and operators must submit the demonstrations required under 40 CFR 265.90(c) and/or 265.90(e). The demonstrations under this section are meant to ensure that LDFs are not unnecessarily required to conduct ground-water monitoring. Non-exempt facilities planning to implement an alternative ground-water monitoring system must submit a monitoring plan (§265.90(d)(1)), as well as initial and periodic reports on ground-water quality as required under §§265.90(d)(3) and (5), and must maintain a record of all ground-water quality assessments at the facility. Facilities planning to implement an alternate hydraulically downgradient monitoring well location must meet certain criteria, make and a submit a demonstration and obtain a certification from a qualified ground-water scientist. The requirements for alternative ground-water monitoring systems ensure that the alternative systems used are capable of early contamination detection, and the reports submitted to EPA are used to assess the impact of the facility on ground-water quality. This information contributes to EPA's goal of quickly detecting and characterizing contamination from LDFs in order to minimize damage to human health and the environment.

Sampling, Analysis and Assessment

EPA promulgated regulations in 40 CFR 265.92 requiring owners and operators to develop and implement sampling and analysis procedures for identifying ground-water contamination. The sampling and analysis plan must be kept on file at the facility and may be reviewed by EPA to determine whether the procedures effectively detect ground-water contamination (§265.92(a)). Section 265.93(d)(1) requires owners and operators to notify EPA in writing of significant increases (or pH decreases) in indicator parameter concentrations at downgradient wells. Owners and operators of facilities where contamination is detected must develop and implement a ground-water quality assessment program, and submit an initial assessment report (§265.93(d)). These requirements provide EPA with the information

necessary to evaluate the impact of the facility on ground-water quality. The sampling, analysis and assessment requirements contribute to EPA's goal of quickly detecting and characterizing contamination from LDFs in order to minimize damage to human health and the environment.

Recordkeeping and Reporting

EPA promulgated regulations in 40 CFR 265.94(a) establishing recordkeeping and reporting requirements for interim status facilities not conducting a ground-water quality assessment program. The regulations direct owners and operators of these facilities to keep records of initial background data, annual and semi-annual ground-water quality and indicator parameter analyses, and ground-water surface elevation data. A record of subsequent indicator parameter comparisons with background levels is also required. Reports included under this section include a quarterly report on drinking water suitability parameters during the first year, and annual reports on indicator parameters and variances from background concentrations, and an annual report on ground-water surface elevations.

40 CFR 265.94(b) establishes recordkeeping and reporting requirements for facilities conducting ground-water quality assessment programs. Owners and operators of these facilities are required to keep records of analyses and evaluations conducted under the program, and to submit annual assessment reports to the Regional Administrator.

The records required under this section provide owners and operators with the information necessary to evaluate changes in ground-water quality at their facilities over time. The reporting requirements supply EPA with the information necessary to determine the impact of the facility on ground-water quality. These recordkeeping and reporting requirements contribute to EPA's goal of preventing undetected releases of hazardous waste from treatment, storage and disposal facilities.

2(b) <u>USE AND USERS OF THE DATA</u>

PERMITTED FACILITIES

Detection Monitoring

Records of ground-water analytical data are used primarily by owners and operators in determining whether their facilities are contaminating ground-water. Notifications of detected contamination are used by EPA to identify facilities that warrant closer attention, and as a basis for evaluating plans for compliance monitoring programs at these facilities. EPA uses data justifying ACLs to determine whether the new limits requested by owners and operators at a contaminated facility are appropriate, and uses engineering feasibility plans for corrective action to determine whether the proposed corrective action program will be effective at the contaminated facility. Demonstrations submitted under this section are used by owners and operators to obtain exemptions from the burden of conducting further monitoring or corrective action activities for contamination which is unrelated to activities at the facility.

Compliance Monitoring

Records of ground-water analytical data required under the compliance monitoring program are used primarily by owners and operators in determining the extent of ground-water contamination, and in identifying exceeded concentration limits or new constituents. Notifications of new constituents are used by EPA in updating the facility monitoring requirements so that all constituents are carefully monitored. EPA uses notifications of exceeded concentration limits to learn as much as possible about the ground-water impact of each contaminated facility, and as a basis for evaluating plans for corrective action. Demonstrations submitted under this section are used by owners and operators to obtain exemptions from the burden of conducting corrective action for contamination which is unrelated to activities at the facility.

Corrective Action

Owners and operators of some contaminated facilities use the exemption demonstration submitted under this section to establish lack of need to implement a corrective action program. The demonstration required to terminate corrective action is used by EPA to evaluate the need for continued efforts where corrective action has already been instituted, and by owners and operators to justify such termination. Reports on the effectiveness of corrective action are used by both EPA and owners and operators to evaluate the success of corrective action and identify any improvements which can be made to the program.

INTERIM STATUS FACILITIES

Applicability and Alternative Ground-Water Monitoring Systems

The exemption demonstrations provided under this section are used by owners and operators of interim status facilities to minimize their monitoring burden, provided that their facilities pose little or no threat to ground-water quality. Plans for an alternative ground-water monitoring system are used by owners and operators of some facilities as a guideline for conducting ground-water quality analyses. The alternative ground-water monitoring plan is reviewed by EPA to determine whether it is appropriate for the specific facility, and the terms of the plan are enforceable against the owner or operator. Ground-water quality assessment reports and records of analyses conducted at facilities using alternative systems are used by owners, operators and EPA to determine the impact of these facilities on ground-water quality, and to identify any changes which should be made to the alternative ground-water monitoring program. Alternate downgradient well locations give some facilities flexibility in placing ground-water monitoring wells. The demonstrations allow EPA to assure that these alternate well locations will not adversely threaten ground-water quality.

Sampling, Analysis and Assessment

The ground-water sampling and analysis plan required under this section is used primarily by owners and operators as a guideline for determining whether their facilities are leaking. Although the sampling and analysis plan is not formally submitted to EPA, it may be reviewed by EPA at any time to determine whether it is appropriate for identifying and evaluating ground-water contamination at the facility. The terms of the plan are enforceable against the owner or operator. Notifications of increased indicator parameter concentrations are used by EPA to identify facilities requiring ground-water quality assessment plans. The plan is used primarily as a guideline for owners and operators in determining the extent of ground-water contamination. Reports on ground-water quality are used both by owners and operators and by EPA to evaluate the degree of ground-water contamination and the extent of contaminant migration.

Recordkeeping and Reporting

The recordkeeping requirements under §265.90(a) require owners and operators of facilities not conducting ground-water quality assessment programs to keep records of initial background data; subsequent analyses of ground-water quality and indicator parameters; ground-water surface elevations; indicator parameter comparisons with background levels; and ground-water quality assessment data. These records are used primarily by owners and operators, but may also be reviewed by EPA upon request. Background data are used as a baseline for evaluations of ground-water quality. Subsequent analyses and comparisons with background levels are used by owners and operators to identify leaking contaminants. Records of ground-water surface elevations assist owners and operators in determining whether monitoring samples are being drawn from appropriately located wells. Records required in this section also provide an ongoing history of ground-water quality at the facility, which is important because changes in ground-water quality may occur slowly over time.

Reports on drinking water suitability parameters submitted during the first year are used by EPA to identify facilities which may already be contaminating ground water and to establish priorities for issuing permits. Reports on indicator parameters are used by EPA to evaluate the impact of the facility on ground-water quality and to identify facilities where further investigation or action is warranted. Reports on ground-water surface elevations are used by EPA to confirm that monitoring wells are appropriately placed.

The recordkeeping requirements of §265.90(b) require owners and operators of facilities conducting ground-water quality assessments to record and report on information collected during the assessments. The records and reports are used by owners and operators and EPA, respectively, to evaluate the impact of facilities on ground-water quality.

3. NONDUPLICATION, CONSULTATIONS, AND OTHER COLLECTION CRITERIA

3(a) NONDUPLICATION

RCRA is currently the sole Federal statutory vehicle for protecting ground-water quality from the effects of the hazardous waste TSDFs for which this monitoring is being required. Pursuant to the Clean Water Act, standards have been established for maintaining surface water quality; however, that Act has limited jurisdiction over ground-water, and the implementation of the Act has only sought to protect against ground-water contamination by activities such as sewage treatment and related sludge disposal. The requirements of RCRA thus provide the only means for gathering information to use in determining the ground-water quality impacts of the regulated facilities. Most of the information required by RCRA is not available from any source but the respondents.

3(b) CONSULTATIONS

The rules covered by this ICR were promulgated using proper rulemaking procedures. EPA made every effort to consult with the general public, State and industry officials, and appropriate Federal agencies.

3(c) EFFECTS OF LESS FREQUENT COLLECTION

Collecting these data less frequently would hinder the Agency in promptly identifying facilities that may be discharging hazardous wastes or constituents to ground-water. Thus, Agency action to require remediation for the protection of potential ground-water users would be hampered or delayed. If contamination problems are allowed to proliferate and persist unremediated, the potential cost of future remediation may grow substantially. Additionally, for facilities which are known to be discharging hazardous wastes to ground-water, a reduction in the information collection requirements would seriously impair the Agency's ability to assess the rate of movement and extent of contamination from discharging facilities.

3(d) GENERAL GUIDELINES

Requirements and justification for reporting information to the Agency more often than quarterly have been discussed under Section 4(d). Collection activities that must be prepared in less than 30 days are also discussed in Section 4(d). Sections 265.94(a)(1) and 265.94(b)(1) require the maintenance of records throughout the active life of the facility and, for disposal facilities, throughout the post-closure care period as well. These records provide a baseline for determining the presence and concentration of hazardous releases to ground-water, and provide a means to assess the effects of the facility on ground-water throughout its active life. Without these records, the impact of the facility on the ground-water beneath and adjacent to it cannot be ascertained.

3(e) CONFIDENTIALITY

Section 3007(b) of RCRA and 40 CFR Part 2, Subpart B, which define EPA's general policy on the public disclosure of information, contain provisions for confidentiality.

3(f) SENSITIVE QUESTIONS

No questions of a sensitive nature are included in any of the information collection requirements.

4. THE RESPONDENTS AND THE INFORMATION COLLECTED

4(a) Respondents and SIC Codes

Facilities in the following SIC codes may be affected by the provisions in the Requirements:

281	Industrial Inorganic Chemicals
282	Plastic materials, Synthetic Resins, etc.
283	Drugs
284	Soaps, Detergents, etc.
285	Paints, Varnishes, etc.
286	Industrial Organic Chemicals
289	Miscellaneous Chemical Products
291	Petroleum
330	Metal Working
495	Sanitary Services

4(b) Information Collected

PERMITTED FACILITIES

Reading the Regulations

(i) Data items:

There are no data items associated with reading the regulations. However, respondents must first read the regulations in order to comply with ground-water monitoring requirements.

(ii) Respondent activities:

In order to comply with the ground-water monitoring requirements, respondents must perform the following activities:

- Read the regulations.

Ground-water Monitoring System

(i) Data items:

There are no data items associated with implementing a ground-water monitoring system. However, respondents must implement a ground-water monitoring system in order to comply with ground-water monitoring requirements.

(ii) Respondent activities:

In order to implement a ground-water monitoring system, respondents must perform the following activities:

- Conduct a hydrogeologic investigation; and
- Design and install a ground-water monitoring system.

Detection Monitoring

(i) Data items:

Owners and operators required to perform detection monitoring must provide the following data:

- A record of ground-water analytical data as measured and in a form necessary for the determination of statistical significance, as required by §264.98(c);
- Notification to the Regional Administrator within seven days of statistically significant evidence of contamination, including information on chemical parameters or hazardous constituents, as required by §264.98(g)(1);
- All data necessary to justify an alternate concentration limit if sought under §264.94(b), submitted within 180 days of confirmation of a release of hazardous constituents to ground-water, as required by §264.98(g)(5)(i);
- An engineering feasibility plan for a corrective action program, submitted within 180 days of confirmation of a release of hazardous constituents to ground-water, as required by §264.98(g)(5)(ii);
- To demonstrate that contamination, if detected, is caused by a source other than a regulated unit or by an error in sampling, analysis, statistical evaluation or natural variation in the ground-water, as required by §264.98(g)(6);
    - A notification to the Regional Administrator, submitted within seven days of detection, of intent to make such a demonstration.
    - A report to EPA, submitted within 90 days of the notification, demonstrating that the exceeded standards were caused by a source other than a regulated unit or by an error in sampling, analysis, or evaluation.

(ii) Respondent activities:

In order to provide the data items listed above, respondents must perform the following activities:

- Determine the ground-water flow rate and direction (annually);
- Sample and analyze ground-water (semi-annually);
- Record ground-water analytical data at the facility (semi-annually);
- Prepare and submit the notification of contamination;
- Re-sample and analyze ground-water for Appendix IX constituents;

- Compile and submit data necessary to establish an alternate concentration limit;
- Prepare and submit an engineering feasibility plan for corrective action;
- Prepare and submit notification of intent to make a demonstration of error or contamination from another source; and
- Prepare and submit the demonstration.

Compliance Monitoring

(i) Data items:

Owners and operators required to perform compliance monitoring must provide the following data:

- A record of all ground-water analytical data obtained under the compliance monitoring program as measured and in a form necessary for the determination of statistical significance by §264.99(c)(2);
- Notification, submitted to the Regional Administrator within seven days of initial or confirmed analysis, of the presence of new constituents in ground-water not already identified in the facility permit, and their concentrations, as required by §264.99(g);
- Notification, submitted to the Regional Administrator within seven days of detection, that concentration limits under §264.94 are being exceeded at any monitoring well, as required by §264.99(h)(1);
- To demonstrate that contamination, if detected, is caused by a source other than a regulated unit or by an error in sampling, analysis, statistical evaluation or natural variation in the ground-water, as required by §264.99(i):
  - A notification to the Regional Administrator, submitted within seven days of detection, of intent to make such a demonstration.
  - A report, submitted within 90 days of the notification, demonstrating that the exceeded standards were caused by a source other than a regulated unit or by an error in sampling, analysis, or evaluation.

(ii) Respondent activities:

In order to provide the data items listed above, respondents must perform the following activities:

- Determine the ground-water flow rate and direction (annually);
- Sample and analyze ground-water (semi-annually);
- Record ground-water analytical data at the facility (semi-annually).
- Compile information for notification of new constituents;
- Prepare and submit the notification of new constituents;
- Compile information on exceeded concentration limits;

- Prepare and submit the notification of exceeded concentration limits;
- Prepare and submit a notification of intent to make a demonstration of error or contamination from another source; and
- Prepare and submit the demonstration.

Corrective Action

(i) Data items:

Owners and operators required to perform corrective action must provide the following data:

- To obtain an exemption from the requirements to take corrective action beyond the facility's boundary, a demonstration that the owner or operator was unable to obtain the necessary permission to undertake such corrective action, despite his or her best efforts, as required by §264.100(e)(2);
- To terminate corrective action, a demonstration, as required by §264.100(f) that the ground-water protection standard has not been exceeded for a period of three consecutive years;
- A semi-annual report on the effectiveness of the corrective action program, as required by §264.100(g); and

(ii) Respondent activities:

In order to provide the data items listed above, respondents must perform the following activities:

- Design and install additional ground-water monitoring wells;
- Sample and analyze ground-water (semi-annually);
- Record ground-water analytical data at the facility (semi-annually);
- Compile and submit information for the demonstration for exemption from corrective action;
- Compile and submit information for the demonstration for termination of corrective action;
- Compile data semi-annually on the effectiveness of the corrective action program; and
- Develop and submit to EPA a semi-annual report on the effectiveness of the program.

INTERIM STATUS FACILITIES

Reading the Regulations

(i) Data items:

There are no data items associated with regulations. However, respondents must first read the regulations in order to comply with ground-water monitoring requirements.

(ii) Respondent activities:

In order to comply with the ground-water monitoring requirements, respondents must perform the following activities:

- Read the regulations.

Applicability and Alternative Ground-Water Monitoring Systems

(i) Data items:

Section 265.90 establishes the applicability of the ground-water monitoring requirements at interim status facilities, and discusses requirements for alternative ground-water monitoring systems. Data items required under these regulations include:

- A demonstration, necessary in order to waive all or part of the ground-water monitoring requirements, of low potential for migration of hazardous waste or hazardous waste constituents from the facility through the uppermost aquifer to water supply wells or surface water (§265.90 (c)). This demonstration must be kept in writing at the facility and must be certified by a qualified geologist or geotechnical engineer. The demonstration must establish the following:

  - The potential for migration of hazardous waste or hazardous waste constituents from the facility to the uppermost aquifer by an evaluation of water balance and unsaturated zone characteristics; and

  - The potential for hazardous waste or hazardous waste constituents which enter the uppermost aquifer to migrate to a water supply well or surface water by an evaluation of saturated zone characteristics and the proximity of the facility to water supply wells or surface water;

- A demonstration, necessary in order to waive the ground-water monitoring requirements for certain surface impoundments, that establishes, based upon consideration of the characteristics of the wastes and the impoundment, that the corrosive wastes will be neutralized to the extent that they no longer meet the corrosivity characteristic before they can migrate out of the impoundment. This demonstration must be in writing and must be certified by a qualified professional (§265.90(e));

- If necessary, a specific plan for an alternative ground-water monitoring system, certified by a qualified geologist or geotechnical engineer and submitted to the Regional Administrator within one year after the effective date of the regulations or within one year of obtaining interim status (§265.90(d)(1));

- If an alternative ground-water monitoring system is used, a written report containing an assessment of ground-water quality submitted to the Regional Administrator within 15 days of the initial assessment, followed by annual reports submitted by March 1 following each calendar year (§265.90(d)(3) and (5)); and

- For alternative systems, a record of the analyses conducted to determine ground-water quality under §265.90(d)(3) to be kept throughout the active life of the facility, and, for disposal facilities throughout the post-closure period as well (§265.90(d)(5)).

- For alternate hydraulically downgradient monitoring well locations, a demonstration showing that the location will meet the criteria outlined in §265.91(a)(3) and a certification by a qualified ground-water scientist that

(ii) Respondent Activities:

In order to provide the data items listed above, respondents must perform the following activities:

- Compile information for the demonstrations;
- Obtain certifications;
- Develop and submit the demonstrations;
- Maintain records of the demonstrations;
- Compile information for an alternative ground-water monitoring plan;
- Obtain certification;
- Develop and submit the plan;
- Compile information for the ground-water quality assessment reports;
- Develop and submit the reports;
- Maintain a record of the ground-water quality assessment data (quarterly);
- Compile the information for the alternate well location demonstration;
- Obtain certification;
- Develop and submit the demonstration; and
- Maintain records of the demonstration.

Sampling, Analysis and Assessment

(i) Data items:

Sections 265.92 and 265.93 require owners and operators of interim status facilities to conduct sampling, analysis and assessment to identify and evaluate changes in the concentrations of hazardous constituents in ground water. Data items required under these regulations include:

- Development of a ground-water sampling and analysis plan, which must be kept at the facility. The plan must include procedures and techniques for sample collection, sample preservation and shipment, analytical procedures, and chain of custody control (§265.92(a));
- If there is a confirmed significant increase (or pH decrease) in indicator parameter concentrations in downgradient wells, a written notification to the Regional Administrator within seven days that the facility may be affecting ground-water quality (§265.93(d)(1));
- If there is a confirmed significant increase (or pH decrease) of indicator parameter concentrations in downgradient wells, a specific plan to be submitted to the Regional Administrator within 15 days after the notification for a ground-water quality assessment program at the facility (§265.93(d)(2)). This plan must be certified by a qualified geologist or geotechnical engineer, and must specify:

- The number, location, and depth of the wells;
- Sampling and analytical methods for those hazardous waste constituents in the facility;
- Evaluation procedures, including any use of previously gathered ground-water quality information; and
- A schedule of implementation;

- A written report containing an assessment of ground-water quality submitted to the Regional Administrator within 15 days after it is determined (§265.93(d)(5)). If the indicator evaluation program is reinstated, this information must also be included in this ground-water quality assessment report (§265.93(d)(6)); and

- A written report of any ground-water quality assessment conducted to satisfy the requirements of §264.93(d)(4) which is initiated prior to final closure of the facility. The report must be submitted to the Regional Administrator within 15 days after the assessment is completed and reported in accordance with §265.93(d)(5) (§265.93(e)).

(ii) Respondent activities:

In order to provide the data items listed above, respondents must perform the following activities:

- Conduct a hydrogeologic investigation;
- Design and install ground-water monitoring system;
- Compile information for a written sampling and analysis plan;
- File the plan at the facility;
- Prepare a ground-water quality assessment plan outline;
- Compile and submit notification;
- Compile and submit information for a ground-water quality assessment plan;
- Obtain and submit plan certification;
- Compile information for the report;
- Develop and submit the report;
- Prepare and submit report of any ground-water quality assessment initiated prior to final closure;
- Conduct quarterly sampling and analysis of ground-water to determine ground-water quality under alternate ground-water monitoring system;
- Conduct semi-annual sampling and analysis of ground-water to obtain ground-water analytical data; and
- Conduct quarterly sampling and analysis as part of a ground-water quality assessment program.

Recordkeeping and Reporting

(i) Data items:

Section 265.94 outlines specific recordkeeping and reporting requirements for owners and operators of interim status facilities. Owners and operators of interim status facilities that are not required to implement a ground-water quality assessment program under §265.93(d)(4) must perform reporting and recordkeeping activities throughout the active life of the facility, and for disposal facilities that do not clean close, throughout the post-closure care period as well (§265.94(a)). Required data items include:

- A record of information required under §265.94(a)(1), including:
  - Initial background concentrations or values for ground-water quality parameters at all monitoring wells as calculated under §265.92(c)(1);
  - The initial arithmetic mean and variance for indicator parameters as calculated under §265.92(c)(2);
  - Annual analyses of parameters used to establish ground-water quality and semi-annual analyses of indicators of ground-water contamination as determined under §§265.92(d)(1) and (2);
  - Ground-water elevation as determined under §265.92(e);
  - Subsequent calculations of arithmetic means and variances for each indicator parameter at each well monitored, and comparisons with background means to determine statistically significant increases (or pH decreases) over initial background concentrations during the contamination indication program as calculated under §265.93(b);
- A report to the Regional Administrator, during the first year when initial background concentrations are being established for the facility, of concentrations or values of parameters characterizing the suitability of the ground water as a drinking water supply for each ground-water monitoring well (§265.92(b)(1)) within 15 days after completing each quarterly analysis, and an identification of any parameters whose concentration or value has been found to exceed the maximum contaminant levels listed in Appendix III (§265.94(a)(2)(i));
- An annual report to the Regional Administrator, submitted by March 1 following each calendar year, on concentrations or values of the indicator parameters listed in §265.92(b)(3) for each monitoring well, as well as the required evaluations for these parameters as calculated under §265.93(b). Also, a separate identification of any statistically significant differences from initial background concentrations found in the upgradient wells as calculated under §265.93(b) and required by §265.93(c)(1) (§265.94(a)(2)(ii)); and
- A report to the Regional Administrator, submitted by March 1 following each calendar year, of the results of the evaluations of ground-water surface elevations under §265.93(f) and a description of the response to that evaluation where applicable (§265.94(a)(2)(iii)).

Owners and operators of facilities conducting a ground-water quality assessment program under §265.93(d)(4) are required to provide the following data items:

- A record of analyses and evaluations specified in the assessment plan required under 265.93(d)(3) throughout the active life of the facility, and, for disposal facilities, throughout the post-closure care period (§265.94(b)(1));

- An annual report, submitted to the Regional Administrator no later than March 1 following each calendar year until final closure of the facility, containing the results of the ground-water quality assessment program, including the calculated or measured rate of migration of hazardous waste or hazardous waste constituents in the ground water during the reporting period (§265.94(b)(2)).

(ii) Respondent activities:

In order to provide the data items listed above, respondents must perform the following activities:

- Record ground-water analytical data at the facility (semi-annually);
- Prepare and submit a quarterly report of concentrations or values of the drinking water suitability parameters (quarterly);
- Prepare and submit a report on indicator parameter concentrations (annually);
- Prepare and submit a report of any significant indicator parameter increases (or pH decreases) in upgradient wells;
- Prepare and submit a report on ground-water surface elevations (annually);
- Record ground-water quality assessment data (quarterly); and
- Prepare and submit a report on the ground-water quality assessment program.

5. THE INFORMATION COLLECTED -- AGENCY ACTIVITIES, COLLECTION METHODOLOGY, AND INFORMATION MANAGEMENT

The following subsections discuss how EPA will collect the information, what activities EPA will perform once the information has been received, and how EPA will manage the information it collects. The subsections also include a discussion of how the information collection requirements affect small entities.

5(a) AGENCY ACTIVITIES

PERMITTED FACILITIES

Detection and Compliance Monitoring

Agency activities associated with the detection and compliance monitoring requirements include reviewing notifications and demonstrations and entering information into a data base. The detection monitoring requirements also require EPA to evaluate ACL data and engineering feasibility plans for corrective action submitted under §264.98(g)(5) to determine whether the proposed ACLs and corrective action programs are appropriate, and to enter information into a data base. Records of ground-water analytical data required under §§264.98(c) and 264.99(c)(2) are not formally submitted to EPA, but must be kept on file at the facility and made available to EPA upon request.
Accordingly, this analysis assumes that there are no Agency activities associated with these recordkeeping requirements.

Corrective Action

Agency activities associated with the corrective action requirements include reviewing demonstrations, evaluating reports on the effectiveness of corrective action, and entering the information into a data base.

INTERIM STATUS FACILITIES

Applicability and Alternative Ground-Water Monitoring Systems

Agency activities associated with applicability and alternative ground-water monitoring systems include reviewing demonstrations, alternative ground-water monitoring plans, ground-water quality assessment reports and alternate well location demonstrations, and entering information into a data base. The records required under this section are not formally submitted to EPA but must be filed at the facility and made available upon request for EPA review. Accordingly, this analysis assumes that there are no Agency activities associated with these recordkeeping requirements.

Sampling, Analysis and Assessment

Agency activities associated with the sampling, analysis and assessment requirements include reviewing the notification of increased indicator parameter concentrations, evaluating the ground-water quality assessment plan and initial reports, and entering information into a data base. Although EPA may review the sampling and analysis plan required under this section, the plan is not formally submitted to EPA. Therefore, there is no Agency activity associated with this requirement.

Recordkeeping and Reporting

Agency activities associated with the reporting requirements of this section include reviewing the information submitted and entering the information into a data base. Records required under this section are not formally submitted to EPA. Therefore, there are no Agency activities associated with these recordkeeping requirements under this section.

5(b) COLLECTION METHODOLOGY AND MANAGEMENT

In collecting and analyzing the information required under the ground-water monitoring regulations, EPA uses state-of-the-art electronic equipment such as personal computers and applicable data base software, when appropriate.

5(c) SMALL ENTITY FLEXIBILITY

The burden imposed by the ground-water monitoring requirements is a function of the threat of contamination of ground-water, from which many people derive their drinking water, and is not sensitive to the size of the organization. Therefore, small entities must comply with the same requirements as large entities.

5(d) COLLECTION SCHEDULE

PERMITTED FACILITIES

Detection Monitoring

Since records of ground-water analytical data collected under detection monitoring are kept at the facility, discussion of a collection schedule is not applicable. Notification of statistically significant evidence of contamination must be submitted within seven days of the initial or confirmed detection. If an alternate concentration limit is sought under §264.94(b), the data necessary to justify the alternate concentration limit, along with the required engineering feasibility plan for a corrective action program, must be submitted within 180 days of the initial or confirmed detection. If the owner or operator plans to make a demonstration under §264.98(g)(6), the notification of intent to make such a demonstration must be submitted within seven days of detection, and the demonstration submitted within 90 days of detection.

Compliance Monitoring

Since records of ground-water analytical data collected under compliance monitoring are kept at the facility, discussion of a collection schedule is not applicable. Notification of the presence of new constituents or exceeded concentration limits must be submitted within seven days of detection. If the owner or operator plans to make a demonstration under §264.99(i), the notification of intent to make such demonstration must be submitted within seven days of detection, and the demonstration report submitted within 90 days of detection.

Corrective Action

The time frame for submission of demonstrations under §§264.100(e)(2) and 264.100(f) is dependent upon the desire of owners and operators to submit such demonstrations. Reports on the effectiveness of the corrective action program must be submitted semi-annually.

INTERIM STATUS FACILITIES

Applicability Alternative Ground-Water Monitoring Systems

The time frame for submission of demonstrations under §265.90(c), §265.90(e), and §265.91(a)(3) are dependent upon the desire of owners and operators to submit such demonstrations. If an owner or operators seeks to implement an alternative ground-water monitoring program, a plan for the alternative program must be submitted within one year of obtaining interim status. Ground-water quality assessment reports for alternative systems must be submitted within 15 days of the initial assessment, and then annually no later than March 1 following each calendar year. Since records of the analyses conducted under the alternative ground-water monitoring program are kept at the facility, a discussion of a collection schedule is not applicable.

Sampling, Analysis and Assessment

Since the sampling and analysis plan must be kept at the facility and made available to the Regional Administrator upon request, discussion of a collection schedule is not applicable. Notification of significant increases (or pH decreases) in indicator parameter concentrations in downgradient wells must be submitted within seven days of confirmation. Plans for a ground-water quality assessment program must be submitted within 15 days of the notification. The report of the results of the initial ground-water quality assessment must be submitted within 15 days of determination. Subsequent ground-water quality assessment reports will be submitted within 15 days of determination at intervals outlined in the ground-water quality assessment plan, which will differ for each facility.

Recordkeeping and Reporting

Since the records required under §§265.94(a)(1) and 265.94(b)(1) are kept at the facility, discussion of a collection schedule is not applicable. Reports of drinking water suitability parameter concentrations and exceeded maximum contaminant levels (MCLs) must be submitted within 15 days of each quarterly analysis conducted during the first year of interim status standing, when initial background levels are being established. Reports of indicator parameter concentrations, variations from initial background concentrations, and ground-water surface elevations must be submitted annually, during the active life of the facility, no later than March 1 following each calendar year. Owners and operators conducting a ground-water quality assessment program must submit results of the ground-water quality assessment program annually no later than March 1 following each calendar year.

6. ESTIMATING THE BURDEN AND COST OF THE COLLECTION

6(a) ESTIMATING RESPONDENT BURDEN

EPA estimated respondent burden hours and agency burden hours associated with all of the requirements covered in this ICR in Exhibits 1 and 2. Exhibit 1 addresses permitted facilities and Exhibit 2 addresses interim status facilities. All exhibits display both the number of hours required to conduct the information collection activity and the cost associated with each requirement.

EPA used information obtained from OSW FY 1997 Beginning of Year Plan Summary Report to estimate the number of permitted and interim status facilities subject to the ground-water monitoring requirements.[1] Based on information contained in the Summary Report, EPA estimates that, as of October 31, 1997, there were 623 land disposal facilities (145 operating facilities and 478 post-closure facilities). For the purposes of this ICR, EPA assumed that the respondent universe will be constant over FYs 1998-2000, since LDFs that close remain in the universe as post-closure facilities, and the number of new facilities entering the universe is expected to be so small that it will have no significant impact on the burden hour and cost estimates for ground-water monitoring.

PERMITTED FACILITIES

The FY 1997 Summary Report does not differentiate between facilities conducting detection monitoring, compliance monitoring, and corrective action. However, specific information from the EPA Regions regarding the status of ground-water monitoring activities at facilities provide such a breakdown of the respondent universe. According to this information, 53 percent of the facilities were conducting detection monitoring, 10 percent compliance monitoring and 37 percent were undertaking corrective action. EPA applied these percentages to the FY 1997 Summary Report data to provide a breakdown of the types of activities being conducted at facilities. Accordingly, EPA estimates that of the 623 permitted facilities subject to the ground-water monitoring requirements, 330 are conducting detection monitoring, 62 are conducting compliance monitoring, and 231 are undertaking corrective action.

In developing the cost estimates for conducting ground-water monitoring, EPA assumed that facilities will hire a consultant to implement their ground-water monitoring system, sample and analyze the ground-water, and compile the data into reports.[2] The capital/startup costs and O&M costs associated with these activities reflect the fees paid to a consultant to perform the activities.[3]

EPA estimates that permitted facilities will implement ground-water monitoring systems consisting of 15 wells, 6 upgradient and 9 downgradient. The 6 upgradient wells consist of 3 single 50 ft. wells and one well cluster consisting of one well each at 45, 90, and 145 ft. The 9 downgradient made up of 3 well clusters, each consisting of a 45, 90, and 145 ft. well. All implementation, sampling and analysis, and data reporting costs reflect these assumptions.

Each of the estimated 623 permitted facilities is required to conduct ground-water sampling and analysis. These activities require the implementation of a ground-water monitoring system, which involves conducting a hydrogeologic investigation (estimated at $48,883) and designing and installing a ground-water monitoring system (estimated at $120,195). EPA assumes that permitted facilities will already have operational ground-water monitoring systems in place; and since the number of permitted facilities is assumed to be constant, no facilities are expected to perform the activities associated with implementing a ground-water monitoring system.

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[1]The FY 1998 Beginning of Year Plan Summary Report was not yet available at the time this ICR was prepared.

[2]USEPA, Office of Regulatory Enforcement, "Estimating Costs for the Economic Benefits of Noncompliance," March 1997.

[3]All capital/startup costs and O&M costs associated with ground-water monitoring are taken from "Estimating Costs for the Economic Benefits of Noncompliance."

Detection Monitoring

EPA estimates that 330 permitted facilities will conduct detection monitoring annually during the period covered by this ICR. EPA estimates that all 330 facilities conducting detection monitoring will determine the ground-water flow rate and direction annually , sample and analyze the ground-water semi-annually, and record all ground-water analytical data. The consultant fees for these activities are estimated to be $814, $63,742, and $3,636 (respectively) per year.

Based on information from EPA ground-water experts, EPA estimates that approximately 10 percent of the facilities conducting detection monitoring (33 facilities) will be required to submit a notification of contamination under §264.98(g)(1), and will conduct additional sampling and analysis. The consultant fees for re-sampling and analysis are estimated to be $69,804, plus a recordkeeping cost of $4,163. These re-sampling costs assume that monitoring ground-water for Appendix IX constituents is approximately 2.29 times as costly as normal detection monitoring.[4] EPA estimates that 50 percent of these facilities (17 facilities) will identify Appendix IX constituents in the ground-water. EPA estimates that 40 percent of the facilities identifying Appendix IX constituents (7 facilities) will submit all data necessary to establish an ACL, and that approximately 20 percent of those who submit such data (1 facility) will receive EPA approval to establish an ACL. Facilities not submitting an ACL and facilities that do not obtain approval for an ACL (10 + 6 = 16 facilities) must submit an engineering feasibility plan for corrective action under §264.98(g)(5)(ii).

Although EPA estimates that 10 percent of the facilities detecting Appendix IX constituents (2 facilities) will submit a demonstration to show contamination from an outside source, EPA estimates that none will receive an exemption from compliance monitoring regulations.

Compliance Monitoring

EPA estimates that 62 facilities will conduct compliance monitoring annually during the period covered by this ICR. EPA assumes that the sampling and analysis and recordkeeping activities necessary to maintain ground-water analytical data at the facility are conducted semi-annually. Since facilities conducting compliance monitoring must monitor for Appendix IX constituents, the sampling and analysis O&M costs for these facilities are assumed to be 2.29 times the sampling and analysis O&M costs for facilities conducting detection monitoring.[5] The annual sampling and analysis costs are estimated to be $139,608. These facilities must also determine the ground-water flow rate and direction annually. The consultant fees for this are estimated to be $814. Additionally, the recordkeeping consultant fees are estimated to be $8,326 per year.

EPA estimates that approximately 25 percent of the facilities conducting compliance monitoring (16 facilities) will confirm the presence of new constituents and submit a notification under §264.99(g).

EPA estimates that approximately 50 percent of the facilities conducting compliance monitoring (31 facilities) will identify exceeded concentration limits, and will therefore compile and submit a notification under §264.99(h)(1). Of the facilities identifying exceeded concentration limits, EPA estimates that 10 percent (3 facilities) will apply for an exemption from the corrective action requirements, but that no facility will submit sufficient information to justify an exemption.

Corrective Action

EPA estimates that 231 facilities will conduct corrective action annually during the period covered by this ICR. This ICR assumes that each of these facilities will sample and analyze ground-water and submit reports on the effectiveness of corrective action semi-annually. This ICR also assumes that facilities conducting corrective action are

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[4]USEPA, Office of Solid Waste, "Ground Water Amendments Rule Cost Analysis," February 1993.

[5]USEPA, Office of Solid Waste, "Ground Water Amendments Rule Cost Analysis," February 1993.

required by EPA to install an additional well cluster, at an estimated cost of $24,039. This number was obtained by dividing the estimated $120,195 for sinking 15 wells by 5 to derive the approximate cost of sinking 3 wells. The consultant fees for sampling and analysis and recording analytical data are estimated to be $76,490 and $4,363, respectively. These costs reflect the additional costs of sampling and analyzing the ground-water in the additional 3 wells and are based on the costs of sampling and analysis under detection monitoring, since the ground-water must be monitored only for specific constituents. They were obtained by adjusting the costs for sampling and analysis and recording analytical data under detection monitoring (which has 15 wells) to reflect a ground-water monitoring system with 18 wells ($63,742 * 18/15 = $76,490 and $3,636 * 18/15 = $4,363).

Owners and operators of facilities already conducting corrective action who wish to submit a demonstration under §264.100(e)(2) will have done so upon implementing corrective action. Of the facilities beginning corrective action during the period covered by this ICR, EPA does not expect any to submit a demonstration. In addition, because very few corrective action measures have been implemented to date, and since ground-water corrective action measures often take 5-10 years to complete, EPA estimates that the number of facilities requesting a termination of corrective action activities will be zero.

EXHIBIT 1
REPORTING AND RECORDKEEPING REQUIREMENTS FOR GROUND-WATER MONITORING REQUIREMENT
ANNUAL ESTIMATED RESPONDENT BURDEN AND COST
PERMITTED FACILITIES

	Hours and Costs Per Respondent Per Activity								Total Hours and Costs		
INFORMATION COLLECTION ACTIVITY	**Leg. $93.43/ Year**	**Mgr. $64.10/ Year**	**Tech. $36.94/ Year**	**Cler. $24.99/ Year**	**Respon. Hours/ Year**	**Labor Cost/ Year**	**Capital/ Startup Cost**	**O & M Cost**	**Number of Respon. or Activities**	**Total Hours/ Year**	**Total Cost/ Year**
Reading the Regulations											
Read the regulations	0.50	0.50	0.50	0.00	1.50	$90	$0	$0	623	934.50	$56,070
SUBTOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	934.50	$56,070
Implement Ground-water Monitoring System											
Conduct hydrogeologic investigation	0.00	0.00	40.00	0.00	40.00	$1,360	$48,883	$0	0	0.00	$0
Design and install ground-water monitoring system	0.00	0.00	4.00	0.00	4.00	$136	$120,195	$0	0	0.00	$0
SUBTOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	0.00	$0
DETECTION MONITORING											
Sampling and Analysis											
Determine ground-water flow rate and direction (annually)(264.98(e))	0.00	0.00	4.00	0.00	4.00	$136	$0	$814	330	1,320.00	$313,500
Sample and analyze ground-water (semi-annually) (264.98(d)-(f))	0.00	0.00	16.00	0.00	16.00	$544	$0	$63,742	330	5,280.00	$21,214,380
Record ground-water analytical data (semi-annually) (264.98(c))	0.00	1.00	2.00	1.00	4.00	$150	$0	$3,636	330	1,320.00	$1,249,380
Notification of Contamination											
Prepare and submit the notification of contamination (264.98(g)(1))	0.25	0.50	1.00	0.50	2.25	$97	$0	$0	33	74.25	$3,201
Re-sampling and Analysis											
Re-sample and analyze ground-water for Appendix IX compounds (264.98(g)(2))	0.00	0.00	8.00	0.00	8.00	$272	$0	$69,804	33	264.00	$2,312,511
Record ground-water analytical data (264.98(c))	0.00	0.50	1.00	0.50	2.00	$75	$0	$4,163	33	66.00	$139,861
Alternate Concentration Limits											
Compile and submit data necessary to establish an alternate concentration limit (264.98(g)(5)(i))	0.00	50.00	125.00	25.00	200.00	$7,775	$0	$0	7	1,400.00	$54,425
Engineering Feasibility plans											
Prepare and submit an engineering feasibility plan for corrective action if required under 264.98(g)(5)(ii)	0.00	50.00	125.00	25.00	200.00	$7,775	$0	$0	16	3,200.00	$124,400
Demonstration											
Prepare and submit notification of intent to make a demonstration under 264.98(g)(6)	0.25	0.50	1.00	0.50	2.25	$97	$0	$0	2	4.50	$194
Prepare and submit the demonstration (264.98(g)(6))	1.00	5.00	25.00	10.00	41.00	$1,461	$0	$0	2	82.00	$2,922
SUBTOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	13,010.75	$25,414,774
COMPLIANCE MONITORING											
Sampling and Analysis											
Determine ground-water flow rate and direction (annually)(264.99(e))	0.00	0	4	0	4.00	$136	$0	$814	62	248.00	$58,900
Sample and analyze ground-water (semi-annually) (264.99(f)-(g))	0.00	0.00	16.00	0.00	16.00	$544	$0	$139,608	62	992.00	$8,689,436

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ANNUAL ESTIMATED RESPONDENT BURDEN AND COST
PERMITTED FACILITIES

	Hours and Costs Per Respondent Per Activity								Total Hours and Costs		
INFORMATION COLLECTION ACTIVITY	**Leg. $93.43/ Year**	**Mgr. $64.10/ Year**	**Tech. $36.94/ Year**	**Cler. $24.99/ Year**	**Respon. Hours/ Year**	**Labor Cost/ Year**	**Capital/ Startup Cost**	**O & M Cost**	**Number of Respon. or Activities**	**Total Hours/ Year**	**Total Cost/ Year**
Record ground-water analytical data (semi-annually)(264.99(c)(2))	0.00	1.00	2.00	1.00	4.00	$150	$0	$8,326	62	248.00	$525,539
Notification of New Constituents											
Compile information for notification of new constituents (264.99(g))	0.00	2.00	4.00	2.00	8.00	$300	$0	$0	16	128.00	$4,800
Prepare and submit the notification (264.99(g))	0.25	1.00	2.00	1.00	4.25	$172	$0	$0	16	68.00	$2,752
Notification of Exceeded Concentration Limits											
Compile information on exceeded concentration limits (264.99(h)(1))	0.00	0.50	1.00	0.50	2.00	$75	$0	$0	31	62.00	$2,325
Prepare and submit the notification (264.99(h)(1))	0.25	0.50	1.00	0.50	2.25	$97	$0	$0	31	69.75	$3,007
Demonstration											
Prepare and submit a notification of intent (264.99(i)(1)) to make a demonstration under 264.99(i)	0.25	0.50	1.00	0.50	2.25	$97	$0	$0	3	6.75	$291
Prepare and submit the demonstration (264.99(i)(2))	1.00	5.00	30.00	5.00	41.00	$1,516	$0	$0	3	123.00	$4,548
SUBTOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	1,945.50	$9,291,598
CORRECTIVE ACTION											
Sampling and Analysis											
Design and install additional ground-water monitoring wells	0.00	0.00	4.00	0.00	4.00	$136	$24,039	$0	231	924.00	$5,584,425
Sample and analyze ground-water (semi-annually) (264.100(d))	0.00	0.00	16.00	0.00	16.00	$544	$0	$76,490	231	3,696.00	$17,794,946
Record ground-water analytical data (semi-annually)(264.100(d))	0.00	1.00	2.00	1.00	4.00	$150	$0	$4,363	231	924.00	$1,042,549
Demonstrations											
Compile and submit information for the demonstration from corrective action (264.100(e)(2))	1.00	5.00	30.00	5.00	41.00	$1,516	$0	$0	0	0.00	$0
Compile and submit information for the demonstration for termination of corrective action (264.100(f))	1.00	10.00	60.00	10.00	81.00	$2,946	$0	$0	0	0.00	$0
Report on the Effectiveness of Corrective Action											
Compile data on the effectiveness of the corrective action program (semi-annually) (264.100(g))	0.00	20.00	140.00	20.00	180.00	$6,400	$0	$0	231	41,580.00	$1,478,400
Develop and submit the report (semi-annually) 264.100(g))	2.00	15.00	70.00	15.00	102.00	$3,782	$0	$0	231	23,562.00	$873,642
SUBTOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	70,686.00	$26,773,963
TOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	86,576.75	$61,536,405

INTERIM STATUS FACILITIES

EPA also used information obtained from the FY 1997 Summary Report to estimate the number of interim status facilities subject to the ground-water monitoring requirements. As of October 31, 1997, there were an estimated 1,024 interim status land disposal facilities (LDFs).

In developing the cost estimates for conducting ground-water monitoring, EPA assumed that interim status facilities will hire a consultant to implement the ground-water monitoring system, sample and analyze the ground-water, and compile the data into reports. The capital/startup costs and O&M costs associated with these activities reflect the fees paid to a consultant to perform the activities.

EPA estimates that interim status facilities will implement ground-water monitoring systems consisting of 4 wells, 1 upgradient and 3 downgradient. Each well is assumed to be 50 ft. All implementation, sampling and analysis, and data reporting costs reflect these assumptions.[6]

Applicability and Alternative Ground-Water Monitoring Systems

As no new LDFs will enter the interim status universe during the period covered by this ICR, EPA estimates that no facilities will submit a demonstration under §§265.90(c) or (e), or under §265.91(a)(3). This ICR assumes that demonstrations under this section are submitted in written form to the Regional Administrator.

This ICR also assumes that facilities wishing to submit an alternative ground-water monitoring plan do so upon obtaining interim status. As no new LDFs will enter the interim status during the period covered by this ICR, no new interim status facilities will submit plans for an alternative ground-water monitoring system each year. EPA estimates that, prior to the period covered by this ICR, 5 percent of all interim status facilities (51 facilities) submitted alternative ground-water monitoring plans and 10 percent of those who applied (5 facilities) received approval to operate an alternative ground-water monitoring system. These facilities are subject to the recordkeeping and reporting requirements of §265.90(d)(3) and (5). EPA assumes that ground-water sampling and analysis and recordkeeping activities will be conducted quarterly, and that ground-water quality assessment reports will be developed and submitted annually. The consultant fees for sampling and analysis and recordkeeping are estimated to be $17,886 and $8,828 per year, respectively.

Sampling, Analysis and Assessment

Each of the estimated 1,024 interim facilities is required to conduct ground-water sampling and analysis of some sort. These activities require the implementation of a ground-water monitoring system. EPA assumes that all interim status facilities will already have operational ground-water monitoring systems in place; and since the no new LDFs are expected to enter the universe during the period covered by this ICR, the number of facilities expected to perform the activities associated with implementing a ground-water monitoring system is zero.

This ICR assumes that only new interim status facilities will submit sampling and analysis plans under §265.92(a) and outlines of ground-water quality assessment plans under §265.93(a). As no new LDFs will enter the interim status universe, no new interim status facilities will submit sampling and analysis plans and outline of ground-water quality assessment plans.

However, this ICR assumes that all interim status facilities not conducting an alternative ground-water monitoring program and that have not already detected contamination ((1,024 - 5) x 0.50 = 510 facilities) are required to conduct ground-water sampling and analysis under §265.93(b). The O&M costs for this sampling and analysis are estimated to be $1,729.

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[6]USEPA, Office of Regulatory Enforcement, "Estimating Costs for the Economic Benefits of Noncompliance," March 1997.

In deriving these facility estimates, EPA estimates that 50 percent of all interim status facilities not conducting an alternative ground-water program ((1,024 - 5) x .5 = 509 facilities) have already detected contamination. These facilities must conduct sampling and analysis on a quarterly basis in accordance with 265.93(d)(4), at an estimated annual cost of $17,886 in consultant fees. In addition, EPA estimates that 2 percent of these facilities (10 facilities) will confirm the presence of ground-water contamination each year. These facilities must submit a notification of contamination to the Regional Administrator, submit a ground-water quality assessment plan based on the outline developed under §265.93(b), conduct an initial ground-water quality assessment, and submit a ground-water quality assessment report as required under §265.93(d)(5).

The remaining 510 facilities (1,024 -5 - 509 = 510 facilities) must conduct sampling and analysis semi-annually, in accordance with 265.92(d) and (e). The estimated annual O&M cost associated with these activities is $8,943.

This ICR assumes that there is no additional burden associated with the requirements of §265.93(e). Any facilities subject to the requirements of this section are considered in the burden estimates under §265.93(d)(5).

Recordkeeping and Reporting

The requirements of §265.94(a) apply only to the 510 facilities that are not conducting an alternative ground-water monitoring program and have not already detected contamination (510 facilities). EPA assumes that the records of ground-water analytical data required under this section will be updated semi-annually. The consultant fees associated with this activity are estimated to be $4,414 per year. Drinking water suitability parameter reports are developed and submitted only by newly interim facilities on a quarterly basis during the first year. Reports on indicator parameters and ground-water surface elevations are submitted annually by all respondents subject to the §265.94(a) requirements.

Based on past experience, EPA estimates that 2 percent of the 510 facilities conducting a ground-water monitoring program in accordance with §265.93(b) (10 facilities) will detect significant indicator parameter increases (or pH decreases) in upgradient wells, and will therefore be required to develop and submit a report in accordance with §265.93(c)(1).

The requirements of §265.94(b) apply to facilities conducting ground-water quality assessments (1,024 - 5 - 510 = 509 facilities). Facilities conducting assessments as part of an alternative ground-water monitoring system are covered in the burden estimates for §265.90 (5 facilities). EPA assumes that the recordkeeping requirements of §265.94 are conducted on a quarterly basis, and that reports on the results of the ground-water quality assessment program are submitted annually. The consultant fees associated with the recording of ground-water quality assessment data are estimated to be $8,828 per year.

EXHIBIT 2
REPORTING AND RECORDKEEPING REQUIREMENTS FOR GROUND-WATER MONITORING REQUIREMENT
ANNUAL ESTIMATED RESPONDENT BURDEN AND COST
INTERIM STATUS FACILITIES

	Hours and Costs Per Respondent Per Activity								Total Hours and Costs		
INFORMATION COLLECTION ACTIVITY	**Leg. $93.43/ Year**	**Mgr. $64.10/ Year**	**Tech. $36.94/ Year**	**Cler. $24.99/ Year**	**Respon. Hours/ Year**	**Labor Cost/ Year**	**Capital/ Startup Cost**	**O & M Cost**	**Number of Respon. or Activities**	**Total Hours/ Year**	**Total Cost/ Year**
Reading the Regulations											
Read the regulations	1.00	1.50	1.50	0.00	4.00	$226	$0	$0	1,024	4,096.00	$231,424
SUBTOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	4,096.00	$231,424
APPLICABILITY AND ALTERNATE GROUND-WATER MONITORING SYSTEMS											
Demonstrations (265.90(c) and 265.90(e))											
Compile information for the demonstration	0.00	100.00	300.00	100.00	500.00	$18,400	$0	$0	0	0.00	$0
Obtain certification	0.00	10.00	25.00	5.00	40.00	$1,555	$0	$0	0	0.00	$0
Develop and submit the demonstration	2.00	25.00	75.00	20.00	122.00	$4,657	$0	$0	0	0.00	$0
Maintain records	0.00	0.00	1.00	1.00	2.00	$57	$0	$0	0	0.00	$0
Alternate Ground-water Monitoring Plan (265.90(d)(1))											
Compile information for an alternate ground-water monitoring plan	0.00	200.00	400.00	150.00	750.00	$28,850	$0	$0	0	0.00	$0
Obtain certification	0.00	10.00	25.00	5.00	40.00	$1,555	$0	$0	0	0.00	$0
Develop and submit the plan	3.00	30.00	60.00	10.00	103.00	$4,298	$0	$0	0	0.00	$0
Ground-water Quality Assessment Reports (265.90(d)(3) and (5))											
Develop and submit the reports	0.50	1.00	2.00	1.00	4.50	$193	$0	$8,828	5	22.50	$45,105
Maintain a record of the ground-water quality assessment data at the facility (quarterly)	0.00	1.00	5.00	2.00	8.00	$275	$0	$0	5	40.00	$1,375
Demonstration for alternate well location (265.91(a)(3))											
Compile information for the demonstration	0.00	50.00	150.00	50.00	250.00	$9,200	$0	$0	0	0.00	$0
Obtain certification	0.00	5.00	12.00	3.00	20.00	$772	$0	$0	0	0.00	$0
Develop and submit the demonstration	1.00	12.00	38.00	10.00	61.00	$2,316	$0	$0	0	0.00	$0
Maintain records	0.00	0.00	1.00	1.00	2.00	$57	$0	$0	0	0.00	$0
SUBTOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	62.50	$46,480
Implementing Ground-water Monitoring System (265.90)											
Conduct hydrogeologic investigation	0.00	0.00	40.00	0.00	40.00	$1,360	$26,773	$0	0	0.00	$0
Design and install ground-water monitoring system	0.00	0.00	4.00	0.00	4.00	$136	$40,441	$0	0	0.00	$0
SUBTOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	0.00	$0
SAMPLING, ANALYSIS AND ASSESSMENT											
Sampling and Analysis Plan (265.92(a))											
Compile information for a written sampling and analysis plan	0.00	1.00	2.00	0.00	3.00	$127	$0	$5,188	0	0.00	$0
File the plan at the facilty	0.00	0.00	0.50	0.50	1.00	$29	$0	$0	0	0.00	$0

EXHIBIT 2
REPORTING AND RECORDKEEPING REQUIREMENTS FOR GROUND-WATER MONITORING REQUIREMENT
ANNUAL ESTIMATED RESPONDENT BURDEN AND COST
INTERIM STATUS FACILITIES

	Hours and Costs Per Respondent Per Activity								Total Hours and Costs		
INFORMATION COLLECTION ACTIVITY	**Leg. $93.43/ Year**	**Mgr. $64.10/ Year**	**Tech. $36.94/ Year**	**Cler. $24.99/ Year**	**Respon. Hours/ Year**	**Labor Cost/ Year**	**Capital/ Startup Cost**	**O & M Cost**	**Number of Respon. or Activities**	**Total Hours/ Year**	**Total Cost/ Year**
Notification of Increased Indicator Parameter Concentrations (265.93(d)(1))											
Prepare a ground-water quality assessment plan outline (265.93(a))	0.00	1.00	2.00	0.00	3.00	$127	$0	$2,771	0	0.00	$0
Compile and submit notification	1.00	1.00	5.00	2.00	9.00	$361	$0	$0	10	90.00	$3,610
Ground-water Quality Assessment Program Plan (265.93(d)(2)-(3))											
Compile and submit information for a ground-water quality assessment plan	0.00	10.00	25.00	5.00	40.00	$1,555	$0	$0	10	400.00	$15,550
Obtain and submit plan certification	1.00	1.00	5.00	2.00	9.00	$361	$0	$0	10	90.00	$3,610
Initial Ground-water Quality Assessment Report (265.93(d)(5))											
Compile information for the report	0.00	25.00	75.00	20.00	120.00	$4,485	$0	$0	10	1,200.00	$44,850
Develop and submit the report	1.00	25.00	40.00	15.00	81.00	$3,266	$0	$0	10	810.00	$32,660
Sampling and Analysis											
Conduct sampling and analysis to determine ground-water quality under alternate ground-water monitoring system (quarterly) (265.90(d)(4))	0.00	0.00	32.00	0.00	32.00	$1,088	$0	$17,886	5	160.00	$94,870
Conduct sampling and analysis of ground-water to obtain analytical data (semi-annually) (265.92(d)-(e))	0.00	0.00	16.00	0.00	16.00	$544	$0	$8,943	510	8,160.00	$4,838,370
Conduct sampling and analysis as part of ground-water quality assessment program (quarterly) (265.93(d)(4))	0.00	0.00	32.00	0.00	32.00	$1,088	$0	$17,886	509	16,288.00	$9,657,766
SUBTOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	27,198.00	$14,691,286
RECORDKEEPING AND REPORTING											
Recordkeeping (265.94(a)(1))											
Record ground-water analytical data at the facility (semi-annually)	0.00	1.00	2.00	1.00	0.00	$150	$0	$4,414	510	0.00	$2,327,640
Report on Drinking Water Suitability Parameters (265.94(a)(2)(i))											
Prepare and submit a report of concentrations or values of the drinking water suitability parameters (quarterly)	0.00	2.00	4.00	2.00	8.00	$300	$0	$0	0	0.00	$0
Reports on Indicator Parameters and Ground-water Surface Elevations (265.94(a)(2)(ii) and (iii))											
Prepare and submit a report on indicator parameter concentrations and evaluations as determined under 265.93(b)	0.00	2.00	4.00	2.00	8.00	$300	$0	$0	510	4,080.00	$153,000
Prepare and submit a report of any significant indicator parameter increases (or pH decreases) in upgradient wells (265.93(c)(1))	0.00	12.00	20.00	8.00	40.00	$1,572	$0	$0	10	400.00	$15,720

EXHIBIT 2
REPORTING AND RECORDKEEPING REQUIREMENTS FOR GROUND-WATER MONITORING REQUIREMENT
ANNUAL ESTIMATED RESPONDENT BURDEN AND COST
INTERIM STATUS FACILITIES

	Hours and Costs Per Respondent Per Activity								Total Hours and Costs		
INFORMATION COLLECTION ACTIVITY	**Leg. $93.43/ Year**	**Mgr. $64.10/ Year**	**Tech. $36.94/ Year**	**Cler. $24.99/ Year**	**Respon. Hours/ Year**	**Labor Cost/ Year**	**Capital/ Startup Cost**	**O & M Cost**	**Number of Respon. or Activities**	**Total Hours/ Year**	**Total Cost/ Year**
Prepare and submit a report on ground-water surface elevations as determined under 265.92(e)	0.00	2.00	4.00	2.00	8.00	$300	$0	$0	510	4,080.00	$153,000
Record of Ground-water Quality Assessment (265.94(b)(1))											
Record ground-water quality assessment data obtained under 265.93(d)(4) (quarterly)	0.00	2.00	4.00	2.00	8.00	$300	$0	$8,828	509	4,072.00	$4,646,152
Ground-water Quality Assessment Report (265.94(b)(2))											
Prepare and submit a report on the results of the ground-water quality assessment program (annually)	2.00	30.00	70.00	20.00	122	$4,782	$0	$0	509	62,098.00	$2,434,038
SUBTOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	74,730.00	$9,729,550
TOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	106,086.50	$24,698,740

6(b) ESTIMATING RESPONDENT COSTS

EPA estimates an average respondent hourly cost (labor plus overhead) of $93.43 for legal staff, $64.10 for managerial staff, $36.94 for technical staff, and $24.99 for clerical staff. In deriving these costs, EPA used cost estimates provided in direct consultations with industries likely to be affected by the requirements, and updated these estimates to current dollars assuming a 2.8 percent rate of inflation, taken from the Bureau of Labor Statistics 1997 Employment Cost Index. Exhibit 5 illustrates the annual respondent costs associated with the information collection activities covered in this ICR.

6(c) ESTIMATING AGENCY BURDEN AND COST

EPA estimated annual Agency burden hours and costs associated with the requirements covered in this ICR in Exhibits 3 and 4. EPA estimates an average hourly Regional labor cost of $56.00 for legal staff, $35.55 for managerial staff, $24.94 for technical staff, and $15.16 for clerical staff. To derive hourly estimates, EPA divided annual compensation estimates by 2,080, which is the number of hours in the Federal work year. EPA then multiplied hourly rates by the standard government overhead factor of 1.6. Exhibit 6 illustrates the annual government costs associated with the information collection activities covered in this ICR.

EXHIBIT 3
REPORTING AND RECORDKEEPING REQUIREMENTS FOR GROUND-WATER MONITORING REQUIREMENT
ANNUAL ESTIMATED AGENCY BURDEN AND COST
PERMITTED FACILITIES

	Hours and Costs Per Respondent Per Activity								Total Hours and Costs		
INFORMATION COLLECTION ACTIVITY	**Leg. $60.42/ Year**	**Mgr. $38.32/ Year**	**Tech. $26.91/ Year**	**Cler. $16.36/ Year**	**Respon. Hours/ Year**	**Labor Cost/ Year**	**Capital/ Startup Cost**	**O & M Cost**	**Number of Respon. or Activities**	**Total Hours/ Year**	**Total Cost/ Year**
DETECTION MONITORING											
Notification of Contamination (264.98(g)(1))											
Review the notification	0.00	0.00	8.00	0.00	8.00	$215	$0	$0	33	264.00	$7,095
Enter the information into data base	0.00	0.00	0.00	2.00	2.00	$33	$0	$0	33	66.00	$1,089
Alternate Concentration Limits (264.98(g)(5)(i))											
Evaluate data submitted to justify an alternate concentration limit	0.00	0.00	160.00	0.00	160.00	$4,306	$0	$0	7	1,120.00	$30,142
Enter information into data base	0.00	0.00	0.00	4.00	4.00	$65	$0	$0	7	28.00	$455
Engineering Feasibility plans (264.98(g)(5)(ii)											
Evaluate engineering feasibility plan for a corrective action program	0.00	0.00	160.00	0.00	160.00	$4,306	$0	$0	16	2,560.00	$68,896
Enter information into data base	0.00	0.00	0.00	4.00	4.00	$65	$0	$0	16	64.00	$1,040
Demonstration (264.98(g)(6))											
Review notification of intent to submit a demonstration of contamination from an outside source	0.00	0.00	8.00	0.00	8.00	$215	$0	$0	2	16.00	$430
Review the demonstration	0.00	0.00	40.00	0.00	40.00	$1,076	$0	$0	2	80.00	$2,152
SUBTOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	4,198.00	$111,299
COMPLIANCE MONITORING											
Demonstration (264.99(i))											
Review the notification	0.00	0.00	8.00	0.00	8.00	$215	$0	$0	3	24.00	$645
Review the demonstration	0.00	0.00	40.00	0.00	40.00	$1,076	$0	$0	3	120.00	$3,228
Notification of New Constituents (264.99(g))											
Review the notification	0.00	0.00	8.00	0.00	8.00	$215	$0	$0	16	128.00	$3,440
Enter information into data base	0.00	0.00	0.00	2.00	2.00	$33	$0	$0	16	32.00	$528
Notification of Exceeded Concentration Limits (264.99(h)(1))											
Review notification	0.00	0.00	8.00	0.00	8.00	$215	$0	$0	31	248.00	$6,665
Enter information into data base	0.00	0.00	0.00	2.00	2.00	$33	$0	$0	31	62.00	$1,023
SUBTOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	614.00	$15,529
CORRECTIVE ACTION											
Demonstrations (264.100(e)(2) and 264.100(f))											
Review the demonstrations	0.00	0.00	40.00	0.00	40.00	$1,076	$0	$0	0	0.00	$0
Report on the Effectiveness of Corrective Action (264.100(g))											
Evaluate report	0.00	0.00	40.00	0.00	40.00	$1,076	$0	$0	231	9,240.00	$248,556
Enter information into data base	0.00	0.00	0.00	8.00	8.00	$131	$0	$0	231	1,848.00	$30,261
SUBTOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	11,088.00	$278,817
TOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	15,900.00	$405,645

EXHIBIT 4
REPORTING AND RECORDKEEPING REQUIREMENTS FOR GROUND-WATER MONITORING REQUIREMENT
ANNUAL ESTIMATED AGENCY BURDEN AND COST
INTERIM STATUS FACILITIES

	Hours and Costs Per Respondent Per Activity								Total Hours and Costs		
INFORMATION COLLECTION ACTIVITY	**Leg. $60.42/ Year**	**Mgr. $38.32/ Year**	**Tech. $26.91/ Year**	**Cler. $16.36/ Year**	**Respon. Hours/ Year**	**Labor Cost/ Year**	**Capital/ Startup Cost**	**O & M Cost**	**Number of Respon. or Activities**	**Total Hours/ Year**	**Total Cost/ Year**
APPLICABILITY AND ALTERNATE GROUND-WATER MONITORING SYSTEMS											
Demonstrations (265.90(c) and 265.90(e))											
Review the demonstrations	0.00	40.00	70.00	10.00	120.00	$3,581	$0	$0	0	0.00	$0
Alternate Ground-water Monitoring Plan (265.90(d)(1))											
Review the alternate ground-water monitoring plan	0.00	25.00	50.00	5.00	80.00	$2,386	$0	$0	0	0.00	$0
Ground-water Quality Assessment Reports (265.90(d)(3) and (5))											
Review the reports	0.00	15.00	25.00	0.00	40.00	$1,248	$0	$0	5	200.00	$6,240
Enter information into a database	0.00	0.00	0.00	8.00	8.00	$131	$0	$0	5	40.00	$655
Demostration for alternate well location (265.91(a)(3))											
Review the demonstrations	0.00	20.00	35.00	5.00	60.00	$1,791	$0	$0	0	0.00	$0
SUBTOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	240.00	$6,895
SAMPLING, ANALYSIS, AND ASSESSMENT											
Notification of Increased Indicator Parameter Concentrations (265.93(d)(1))											
Review the notification	0.00	2.00	6.00	0.00	8.00	$238	$0	$0	10	80.00	$2,380
Enter information into a database	0.00	0.00	0.00	8.00	8.00	$131	$0	$0	10	80.00	$1,310
Ground-water Quality Assessment Plan (265.93(d)(2))											
Evaluate the plan	0.00	10.00	30.00	0.00	40.00	$1,191	$0	$0	10	400.00	$11,910
Initial Ground-water Quality Assessment Report (265.93(d)(5))											
Evaluate the reports	0.00	10.00	30.00	0.00	40.00	$1,191	$0	$0	0	0.00	$0
Enter information into a database	0.00	0.00	0.00	8.00	8.00	$131	$0	$0	0	0.00	$0
SUBTOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	560.00	$15,600
RECORDKEEPING AND REPORTING											
Report on Drinking Water Suitability Parameters (265.94(a)(2)(i))											
Review the report	0.00	23.00	69.00	0.00	92.00	$2,739	$0	$0	0	0.00	$0
Enter information into a database	0.00	0.00	0.00	32.00	32.00	$524	$0	$0	0	0.00	$0
Reports on Indicator Parameters and Ground-water Surface Elevations (265.94(a)(2)(ii) and (iii))											
Review report on indicator concentrations and evaluations as determined under 265.93(b)	0.00	1.50	6.00	0.50	8.00	$227	$0	$0	510	4,080.00	$115,770
Review report on significant indicator parameter increases in upgradient wells	0.00	1.50	6.00	0.50	8.00	$227	$0	$0	10	80.00	$2,270

EXHIBIT 4
REPORTING AND RECORDKEEPING REQUIREMENTS FOR GROUND-WATER MONITORING REQUIREMENT
ANNUAL ESTIMATED AGENCY BURDEN AND COST
INTERIM STATUS FACILITIES

	Hours and Costs Per Respondent Per Activity								Total Hours and Costs		
INFORMATION COLLECTION ACTIVITY	**Leg. $60.42/ Year**	**Mgr. $38.32/ Year**	**Tech. $26.91/ Year**	**Cler. $16.36/ Year**	**Respon. Hours/ Year**	**Labor Cost/ Year**	**Capital/ Startup Cost**	**O & M Cost**	**Number of Respon. or Activities**	**Total Hours/ Year**	**Total Cost/ Year**
Review report on ground-water surface elevations as determined under 265.92(e)	0.00	1.50	6.00	0.50	8.00	$227	$0	$0	510	4,080.00	$115,770
Enter information into a database	0.00	0.00	0.00	8.00	8.00	$131	$0	$0	510	4,080.00	$66,810
Ground-water Quality Assessment Report (265.94(b)(2))											
Review the ground-water quality assessment report	0.00	10.00	30.00	0.00	40.00	$1,191	$0	$0	509	20,360.00	$606,219
Enter information into a database	0.00	0.00	0.00	8.00	8.00	$131	$0	$0	509	4,072.00	$66,679
SUBTOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	36,752.00	$973,518
TOTAL	varies	varies	varies	varies	varies	varies	varies	varies	varies	37,552.00	$996,013

6(d) ESTIMATING THE TOTAL BURDEN AND COSTS

Exhibit 5 shows the aggregate burden, total labor cost per year, total capital/startup costs per year, total O&M costs per year, and the overall annual cost to respondents. The bottom line annual burden to respondents over three years is 192,663 hours, with a cost of approximately $86,235,145, approximately $73.4 million of which is attributable to O&M costs (consultant fees).

Exhibit 6 shows the aggregate burden and cost to the government. The bottom line annual burden to the Agency is 53,452 hours, at a cost of $1,401,658.

6(e) REASONS FOR CHANGE IN BURDEN

This ICR is an exhaustive description of the total respondent burden for all activities related to the ground-water monitoring requirements. Since the last ICR, the overall annual burden estimate has risen from 181,179 hours to 192,663 hours, an increase of 11,484 hours per year. This increase can be accounted for largely by the increased number of permitted facilities, which are subject to more burdensome requirements. The total estimated annual cost has risen by approximately $79 million over the last ICR (from $6.9 million to $86.2 million). Nearly all of this increase can be attributed to the addition of O&M costs (which represent fees paid to consultants for activities such as ground-water sampling and analysis) to the ICR calculations. These changes represent adjustments made to the ICR to more accurately and completely reflect the burden and costs placed on respondents by these requirements; they do not reflect any program changes resulting from Agency action.

EXHIBIT 5
TOTAL ESTIMATED RESPONDENT BURDEN AND COST SUMMARY
PERMITTED AND INTERIM STATUS FACILITIES

EXHIBIT	Total Hours per Year	Total Labor Cost Per Year	Total Annual Capital/Startup Costs Per Year	Total Annual O&M Costs Per Year	Total Cost per Year
PERMITTED FACILITIES					
Reading the Regulations	935	$56,070	$0	$0	$56,070
Implement Ground-water Monitoring System	0	$0	$0	$0	$0
Detection Monitoring	13,011	$470,493	$0	$24,944,281	$25,414,774
Compliance Monitoring	1,946	$69,183	$0	$9,222,415	$9,291,598
Corrective Action	70,686	$2,543,772	$5,553,009	$18,677,182	$26,773,963
SUBTOTAL	86,577	$3,139,518	$5,553,009	$52,843,878	$61,536,405
INTERIM STATUS FACILITIES					
Reading the Regulations	4,096	$231,424	$0	$0	$231,424
Applicability and Alternate Ground-water Monitoring Systems	63	$2,340	$0	$44,140	$46,480
Implement Ground-water Monitoring System	0	$0	$0	$0	$0
Sampling, Analysis, and Assessment	27,198	$936,952	$0	$13,754,334	$14,691,286
Recordkeeping and Reporting	74,730	$2,984,958	$0	$6,744,592	$9,729,550
SUBTOTAL	106,087	$4,155,674	$0	$20,543,066	$24,698,740
TOTAL	192,663	$7,295,192	$5,553,009	$73,386,944	$86,235,145

EXHIBIT 6
TOTAL ESTIMATED AGENCY BURDEN AND COST SUMMARY
PERMITTED AND INTERIM STATUS FACILITIES

EXHIBIT	Total Hours per Year	Total Cost per Year
PERMITTED FACILITIES		
Detection Monitoring	4,198	$111,299
Compliance Monitoring	614	$15,529
Corrective Action	11,088	$278,817
SUBTOTAL	15,900	$405,645
INTERIM STATUS FACILITIES		
Applicability and Alternate Ground-water Monitoring Systems	240	$6,895
Sampling, Analysis, and Assessment	560	$15,600
Recordkeeping and Reporting	36,752	$973,518
SUBTOTAL	37,552	$996,013
TOTAL	53,452	$1,401,658

6(f) BURDEN STATEMENT

Permitted Facilities

Overall, EPA estimates that permitted LDFs will incur an average reporting burden of 112.7 hours per year, which includes time for developing and submitting notifications, reports, and demonstrations. They will also incur a recordkeeping burden of 26.0 hours per year, which includes time for reading the regulations, implementing a ground-water monitoring system, performing and keeping records of ground-water monitoring, and maintaining records. These estimates represent the overall reporting and recordkeeping burdens placed on permitted facilities, regardless of whether they are performing detection monitoring, compliance monitoring, or corrective action. The specific burden estimates for these activities are as follows:

- For facilities performing detection monitoring, EPA estimates an average reporting burden of 14.4 hours per year and an average recordkeeping burden of 26.5 hours per year.

- For facilities performing compliance monitoring, EPA estimates an average reporting burden of 7.4 hours per year and an average recordkeeping burden of 25.5 hours per year.

- For facilities performing corrective action, EPA estimates an average reporting burden of 282.0 hours per year and an average recordkeeping burden of 25.5 hours per year.

Interim Status Facilities

EPA estimates that interim status LDFs will incur an average reporting burden of 71.5 hours per year, which includes time for developing and submitting notifications, reports, and demonstrations. They will also incur a recordkeeping burden of 32.1 hours per year, which includes time for reading the regulations, implementing a ground-water monitoring system, performing and keeping records of ground-water monitoring, and maintaining records.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR Part 9 and 48 CFR Chapter 15.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, OPPE Regulatory Information Division, U.S. Environmental Protection Agency (2137), 401 M St., S.W., Washington, D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, DC 20503, Attention: Desk Officer for EPA. Include the EPA ICR number and OMB control number in any correspondence.